Final Report

COUNTY OF ALLEGHENY

RICH FITZGERALD
COUNTY EXECUTIVE

October 22, 2015

Ellen Wentworth
U.S. Environmental Protection Agency
Air Protection Division, Region III (3AP00)
1650 Arch Street
Philadelphia, PA 19103

Re: Final Report for EPA Assistance Agreement FM-83493601-1
"Liberty Clairton Low Emissions Quench Tower Project"

Dear Ms. Wentworth:

The Allegheny County Health Department (ACHD) has completed "The Liberty Clairton Low Emissions Quench Tower Project." With that, we are now forwarding to you the Final Report as required under the terms of Agreement FM-83493601-1.

The Project has resulted in the replacement of a polluting quench tower with a low emissions quench tower #5A at the United States Steel Clairton Coke Works.

On behalf of the citizens of Allegheny County, and particularly those living in the Liberty Clairton PM2.5 nonattainment area being served by this program, we wish to thank the U.S. EPA for the opportunity to participate in this worthwhile endeavor, and to thank you and your colleagues for the assistance that you provided.

Sincerely,

Jayme Graham,
Manager

cc: Carl Davis, U.S. EPA
Jim Kelly, ACHD
C. Davis U.S. Steel

ALLEGHENY COUNTY HEALTH DEPARTMENT
AIR QUALITY PROGRAM

This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement EM-83493601-1 to the Allegheny County Health Department. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

Allegheny County Health Department Application and Project

As the local agency with jurisdiction over air quality, the Allegheny County Health Department (ACHD) is responsible for the development and implementation of the State Implementation Plan (SIP) to attain and maintain the NAAQS for $PM_{2.5}$ within the Liberty-Clairton $PM_{2.5}$ Annual Nonattainment Area ("Liberty-Clairton area") referred to in the RFA.

ACHD submitted a grant application for a project involving the installation of a new, low emissions, quench tower at the United States Steel Corporation's Mon Valley Works – Clairton Plant (U.S. Steel Clairton Coke Works), and was awarded a grant in the amount of $2,913,124 under U.S. EPA Cooperative Agreement EM-83493601-0 (subsequently revised to EM-83493601-1).

Reporting Requirements of EM-83493601-0, 1

Under the Cooperative Agreement's Administrative Condition 25 and Programmatic Condition 1, below, ACHD must submit a "Final Report" for the Liberty-Clairton Low Emissions Quench Tower Project:

> *Administrative Condition 25:*
> *In accordance with EPA regulations (40 CFR 31.40 for State, local and tribal governments, the recipient agrees to submit to the EPA Project Officer within 90 days after the expiration or termination of the approved project period a final report and at least one reproducible copy suitable for printing. The final report shall document project activities over the entire project period and shall include brief information on each of the following areas: 1) a comparison of actual accomplishments with the anticipated outputs/outcomes specified in the assistance agreement work plan; 2) reasons why anticipated outputs/outcomes were not met; and 3) other pertinent information, including explanation of high unit costs*

> *Programmatic Condition #1: Reporting Requirement*
> *The final technical report shall be completed within 90 days of the completion of the period of performance. The final technical report should include: (a) a summary of the project or activity, (b) advances achieved and (c) costs of the project or activity. In addition, the final technical report shall (d) discuss the problems, successes, and lessons learned from the project or activity that could help overcome structural, organizational or technical obstacles to implementing a similar project elsewhere. (Note: Designation letters "(a)", "(b)", "(c)" and "(d)" were added by the report writer for purposes of directing the reader to the applicable portion of the report where the issues were addressed.)*

Finally, the ACHD prepared the grant application and administered the grant, and U.S. Steel was responsible for design, engineering, equipment procurement, site preparation, permit application, installation, startup and testing. The ACHD also prepared and issued the necessary installation and operating permits, and testing protocols. Below is a timeline of important project milestones.

Activity	Timeline
ACHD, w/US Steel input, prepared and submitted grant	May 4, 2010 to June 4, 2010
EPA reviewed application and notified awardee	June 4, 2010 to October 22, 2010.
Prepared and signed ACHD-USS agreement	July 28, 2011 to July 27, 2012.
US Steel conducted detailed design and engineering	Ongoing throughout project.
ACHD approved permit for the installation	March 10, 2011.
US Steel installed the project.	October 1, 2012 to December 31, 2013.
US Steel conducted Start-up and Emissions Testing	Completed June 30, 2014.

2) Advances Achieved *{Addresses Programmatic Condition 1(b)}*

The quench station quenches or cools the hot coke produced by the coke oven batteries. At the end of the coking cycle, hot coke is pushed out of the battery ovens onto a "hot car" that is shifted along the rail line to a quench station. Particulate matter (PM) emissions occur when the hot coke is deluged with water at the quench station. A steam plume is created during the quenching operation in which PM is carried up the quench tower and PM dissolved in the steam will also rise in the tower. Prior to the project, these emissions were controlled by maintaining low total dissolved solids (TDS) content in the quench water and by design of the quench tower.

The new quench tower has an advanced "low emission" baffle system. This design and the quality of the quench water results in lower emissions as compared to the old tower at the quench station. The new quench tower, used in conjunction with Coke Oven Batteries 13, 14 and 15, is of the same design as that used for U.S. Steel's new "C" coke oven battery.

The new quench tower's state-of-the-art baffle system consists of louver-like baffles arranged in a chevron pattern. The baffles contain the particulate emissions by mechanical deflection and electrostatic adsorption. This technology is not new, but it has been substantially improved by adding a second set of baffles. The lower set of baffles is constructed from stainless steel, while the upper set is constructed from polypropylene. A second mist suppression spray, located just below the baffles, helps the dust particles suspended in the stream act as condensation cores around which droplets form that either precipitate on the louvers above, or descend downward. The quench tower also is taller than the old quench towers used at the Clairton Coke Works Plant, in order to achieve the required draft for the second set of baffles.

4) **A comparison of actual accomplishments with the anticipated outputs/outcomes specified in the assistance agreement work plan**
{Addresses Administrative Condition 25.1}

a. The anticipated outputs specified in the work plan were:

i. The replacement of an old quench tower with a new, low emissions quench tower at the U.S. Steel Clairton Coke Works facility, substantially reducing $PM_{2.5}$ emissions affecting the Liberty Clairton area.
ii. Associated work products included the installation permit application and permit – which set the environmental parameters under which the new quench tower was installed, the emissions testing protocol, and emissions test report.
iii. Progress reports and a final report delivered to U.S. EPA in accordance with the grant requirements.

Conclusion: All of the project outputs were produced. The required "Single Audit" was performed by United States Steel. However, as of the date of this Final Report, it has not been submitted through the Federal Audit Clearinghouse, because their survey site is offline for maintenance and testing due to an ongoing IT security investigation. U.S.S. will make the submittal as soon as the Clearinghouse comes online. In the meantime, the Single Audit is attached at the end of this Final Report.

5) **Reasons why anticipated outputs/outcomes were not met:**
{Addresses Administrative Condition 25.2}

Since the expected reduction in emissions of 200 tpy of $PM_{2.5}$ was greater than the actual emissions in 2011, the result is that the amount of $PM_{2.5}$ being emitted from the new quench tower and the reduction in the ambient $PM_{2.5}$ levels with the new quench tower in place are lower than anticipated by the project narrative.

The reason for this is twofold. First, the emission factors used in the model that forecasted 200 tpy reduction and ambient $PM_{2.5}$ levels for the grant narrative were found to be inappropriate and have been revised downward. Second, prior to, and at the time the grant application narrative was written, emissions testing of quench towers was rarely performed, and initial attempts at such testing used methods that did not produce accurate results. Since that time, ACHD has revised its testing methodology, and the emissions measure much lower than under previous testing regimes.

6) **Other pertinent information, including explanation of high unit costs**
{Addresses Administrative Condition 25.3}

The initial estimate of the cost of the Low Emissions Quench tower was $18,350,000 of which $2,913,124 was to be funded by the EPA Targeted Airshed Grant, and the remaining $15,436,876 was to be leveraged funds from U.S. Steel.

The final cost was $36,061,473. This included the same initial amount of EPA grant funding, and $33,148,349 in leveraged funds from the U.S. Steel.

The difference (overage) between the initial estimate and the final cost is $17,711,473 all of which was born by U.S. Steel.

Table 1

USS Clairton Coke Works Quench Emissions Inventory	$PM_{2.5}$ (actuals, tons)	
Source	2011	2014
Quench Tower 5	20.0	3.5
Quench Tower 5A	--	8.2

Table 2

	Max Modeled Impacts (anywhere off-property)		
	Conc. ($\mu g/m^3$)		
Scenario	Max 1-hour	Max 24-hour	Max Annual
2011 Scenario (Quench 5 only)	24.22	5.58	0.22
2014 Scenario (Quench 5 and new Quench 5A)	4.24	0.98	0.05

Model notes:

Direct $PM_{2.5}$ only
AERMOD with default options
Met data: 2012-2014 MMIF (Clairton grid cell)
Receptors at 100 m spacing surrounding Clairton
Emissions based on actuals for 2011 and 2014 (above)

Table 3 Liberty Monitored Results, 2011-2014, in $\mu g/m^3$

Statistic	2011	2012	2013	2014		
Annual Weighted Mean	14.0	14.3	12.0	12.7		
Annual 98th-Percentile	38	43	31	32		
Design Value	'09-'11	'10-'12	'11-'13	'12-'14	NAAQS	
Annual	15.0	14.8	13.4	13.0	12.0	
24-Hour	44	43	37	35	35	

- Annual weighted means based on average of calendar quarter averages (no rounding)
- Design values are based on 3-year averages of statistics for comparison to NAAQS
- 3-year averages are rounded to 0.1 (annual basis) and integer (24-hour basis)

Table 4 (continued)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
PRELIMINARY DESIGN VALUE REPORT

Report Date: [illegible]

Pollutant: Site-Level PM2.5 - Local Conditions [illegible]
Standard Units: Micrograms/cubic meter [illegible]
NAAQS Standard: PM25 24-hour [illegible] / PM25 Annual [illegible]
Statistic: Annual Weighted Mean Level: [illegible]
Statistic: Annual 98th Percentile Level: [illegible]

Design Value Year: [illegible]
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: [illegible]

Site ID / Street Address	Cred. Days	Comp. Qtrs	98th Percentile	Wtd. Mean	Cert& Eval	Cred. Days	Comp. Qtrs	98th Percentile	Wtd. Mean	Cert& Eval	Cred. Days	Comp. Qtrs	98th Percentile	Wtd. Mean	Cert& Eval	24-Hour Design Value	24-Hour Valid Ind.	Annual Design Value	Annual Valid Ind.
[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]		[illegible]	4	[illegible]	[illegible]		[illegible]	Y	[illegible]	Y

Notes: [illegible]

Page [illegible]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
PRELIMINARY DESIGN VALUE REPORT

Report Date: [illegible]

Pollutant: Site-Level PM2.5 - Local Conditions [illegible]
Standard Units: Micrograms/cubic meter [illegible]
NAAQS Standard: PM25 24-hour [illegible] / PM25 Annual [illegible]
Statistic: Annual Weighted Mean Level: [illegible]
Statistic: Annual 98th Percentile Level: [illegible]

Design Value Year: [illegible]
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Pennsylvania

Site ID / Street Address	Cred. Days	Comp. Qtrs	98th Percentile	Wtd. Mean	Cert& Eval	Cred. Days	Comp. Qtrs	98th Percentile	Wtd. Mean	Cert& Eval	Cred. Days	Comp. Qtrs	98th Percentile	Wtd. Mean	Cert& Eval	24-Hour Design Value	24-Hour Valid Ind.	Annual Design Value	Annual Valid Ind.
[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]		[illegible]	Y	[illegible]	Y

Notes: [illegible]

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PennFUTURE
Every environmental victory grows the economy®

Citizens for Pennsylvania's Future
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VIA CERTIFIED MAIL

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Mario Longhi, President and CEO
United States Steel Corporation
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Pittsburgh, PA 15219

Amy Smith-Yoder, General Manager
United States Steel Corporation Mon-Valley Works
400 State Street
Clairton, PA 15205

Re: Notice of Intent to Sue under the Federal Clean Air Act and/or Article XXI of the Allegheny County Health Department's Rules and Regulations

Dear Administrator McCarthy, Administrator Garvin, Secretary Quigley, Director Malone, Director Hacker, Executive Fitzgerald, Mr. Longhi and Ms. Smith-Yoder:

The following provides notice that Citizens for Pennsylvania's Future (PennFuture) on behalf of itself and its members, intends to file a citizen suit under the Federal Clean Air Act (the CAA), 42 U.S.C. § 7401 et seq. (1970), the Pennsylvania Air Pollution Control Act, 35 P.S. §§ 4001-4015 (APCA), and Article XXI of the Allegheny County Health Department's (ACHD or "the Department") Rules and Regulations, Article XXI, § 2109.11. PennFuture intends to file suit against United States Steel Corporation (US Steel) for ongoing violations of emission standards and limitations at the Clairton Coke Works located in Clairton, Pennsylvania for the period beginning January 2012 and continuing thereafter.

PennFuture is a not for profit public interest organization whose mission is to create a just future where nature, communities and the economy thrive. PennFuture has a business address of 610 North Third Street, Harrisburg, Pennsylvania 17101, and a local address of 200 First Avenue, Suite 200, Pittsburgh, Pennsylvania 15222. This notice is provided on behalf of PennFuture and certain of its members who have suffered and continue to suffer harm as a result of US Steel's failure to comply with emission standards and limitations at the Clairton Coke Works.

BACKGROUND AND PERMITS

US Steel's Clairton Coke Works is the largest by-products coke plant in North-America, with annual production of about 4.7 million tons of coke. The Coke Works is located about 20 miles south of Pittsburgh along the Monongahela River. The Coke Works has 10 operational coke batteries, each made up of a series of high temperature ovens. The oldest coke batteries in operation at the plant were built in 1955; the most recent began operating in November 2012.

The coke-making process begins when coal is "charged" or deposited into large ovens that bake the coal at very high temperatures. The coal is baked without oxygen to drive off impurities. These gases are captured and transported through a collection system to a by-products recovery plant, which removes impurities from the coke oven gas for its reuse as fuel to heat the coke ovens. When coke oven gases are returned to the ovens and combusted, the resultant emissions are released through stacks affiliated with each of the 10 batteries. After the coal has been fully baked, the resultant coke is pushed from the ovens into large metal cars that transport the coke to quench towers where the coke is showered with water. Emissions from the pushing operations are captured by vacuum hoods and sent to the pushing emissions control (PEC) baghouse. Emissions from the cars as they transport the coke between the ovens and quench towers are not captured, with the exception of Battery B, which has a shed that covers the entire length of the track. In addition, fugitive emissions may occur at various points in the coking process, such as during the charging of coal and from leaks in oven doors.

The ACHD regulates Clairton's Coke Works as a major source of air pollutants under the CAA, APCA and ACHD Rules and Regulations. Title V Permit No. 0052, issued on March 27, 2012, authorizes air emissions from Batteries 1, 2, 3, 13, 14, 15, 19, 20, and B, and their associated baghouses. Each facility is identified by individual Operating Permit numbers, shown below.

Battery	Permit Number
Battery 1	P001
Battery 2	P002
Battery 3	P003
Battery 13	P007
Battery 14	P008
Battery 15	P009
Battery 19	P010
Battery 20	P011

Battery B	P012
Batteries 1,2,3 PEC System	P050
Batteries 13,14,15 PEC System	P052
Batteries 19 & 20 PEC System	P053
Battery B PEC System	P054

In November 2007, US Steel announced plans to construct a new Coke Battery C at Clairton that would replace existing Batteries 7, 8 and 9, built in 1954. Battery C would have fewer ovens and doors, but each oven would be larger so as to produce 1,107, 384 tons of coke annually. US Steel indicated that Battery C would significantly reduce overall particulate emissions at the facility and meet all environmental compliance standards. Construction of Battery C was to be completed by 2011.

At the same time, US Steel announced plans to construct a new Battery D after the completion of Battery C. Battery D would replace Batteries 1, 2 and 3, built in 1955. US Steel predicted that Battery D would result in similar pollutant reductions to Battery C when it was finished in 2013.

The ACHD issued IP No. I011 for Battery C on July 24, 2008. US Steel completed Battery C and a new low-emission quench tower, behind schedule, in November 2012. When US Steel began operating Battery C, it consistently violated charging emission limitations in IP No. I011. In response to these violations, the ACHD entered a settlement agreement with US Steel that, among other things, allowed the company to continue operating Battery C in violation of its emission limitations until at least April 30, 2016, during which time US Steel was to work on a fix for the problem. The settlement agreement meant that US Steel would be allowed to operate the new facility in continuous violation of the law for up to three and one-half years after operations began.

On September 4, 2009, the ACHD issued IP No. I012 for the proposed Battery D. US Steel had committed in a Consent Agreement to close Batteries 1, 2 and 3 by December 31, 2014 in order to further reduce air pollution at the Clairton Coke Works. At some point, however, US Steel advised the ACHD that it no longer intended to pursue the promised further reductions in air emissions at Clairton, and the ACHD promptly relieved US Steel of its promise to shut down Batteries 1, 2 and 3. Those batteries continue to be operated by US Steel in violation of applicable emission limitations.

PAST VIOLATIONS AND ENFORCEMENT ACTIONS

US Steel has a history of operating the Coke Works in violation of federal, state and local air pollution laws, and, despite being the subject of a series of enforcement actions, the facility continues to be operated, more than 35 years after enactment of the federal Clean Air Act, in violation of applicable air emission limitations and standards.

As early as 1972, the Pennsylvania Department of Environmental Protection ("PA DEP") sued US Steel for violating the state's air pollution laws at Clairton. The parties resolved that litigation through entry of a Consent Decree on September 25, 1972 that was intended to reduce

particulate matter and sulfur dioxide emissions. Within a year and one-half, the PA DEP had to return to Court in order to seek a civil contempt order for US Steel's violation of the Consent Decree.

On May 22, 1979, the US Environmental Protection Agency ("US EPA") filed a Complaint in the United States District Court for the Western District of Pennsylvania against US Steel, alleging numerous violations of the Clean Air Act. On July 10, 1979, US Steel entered into a Consent Decree settling the case. PA DEP and the ACHD intervened and participated in the settlement agreement. Between May 8, 1981 and June 28, 1985, the US District Court amended US Steel's obligations under the Consent Decree on five separate occasions. Finally, on September 27, 1988, the US District Court entered an entirely new Consent Decree that fully replaced the prior agreements. The 1988 Consent Decree was itself amended twice in 1990 and 1991.

On February 25, 1991, the US EPA again filed a Complaint against US Steel in the United States District Court for the Western District of Pennsylvania alleging numerous violations of the Clean Air Act and the earlier Consent Decree entered into by US Steel. On June 25, 1993, the United States District Court entered what it titled the "Second Consent Decree" between US Steel and US EPA. The 1993 Consent Decree contained inspection, monitoring, reporting and compliance requirements addressing, among other things, emissions related to charging, leaking doors, off-take pipes, travelling, combustion stacks, quenching, gas desulfurization and venting unburned coke gas. US Steel's obligations under the 1993 Consent Decree terminated on December 31, 1999.

On June 1, 2007, US Steel entered into a Consent Agreement to correct high priority particulate matter violations that ACHD determined were occurring at Battery B since at least September 2005. The Consent Order allowed US Steel until June 2010, or five years since the particulate matter violations were documented by ACHD, to make the repairs necessary to correct the violations. The settlement agreement was not entered as a Court Order.

On March 17, 2008, US Steel entered into another Consent Agreement with ACHD. The 2008 Consent Agreement indicated that US Steel reported violations of combustion stack opacity limits and pushing emission standards, but the Consent Agreement did not state at which ovens these violations were occurring. Nonetheless, US Steel agreed to shut down coke batteries 7, 8 and 9 by December 31, 2012, and to shut down coke batteries 1, 2 and 3 by December 31, 2014. US Steel also committed to, among other things, taking corrective actions at batteries 15, 19 and 20, and to install a new baghouse at screening station no. 3.

On September 30, 2010, US Steel and ACHD entered into a Second Amendment to the 2008 Consent Agreement.[1] The Second Amendment altered the company's strategy for further reducing particulate matter emissions at the facility. US Steel eliminated its plans to shut down Batteries 1, 2 and 3. Instead, the Second Amendment extended coking times at Batteries 1, 2 and 3 and required various maintenance and repair plans to be implemented. The Second

[1] US Steel and ACHD entered into a First Amendment to the March 2008 COA on November 19, 2008, but that agreement only addressed corrective actions to be taken at US Steel's Edgar Thompson Works.

Amendment also indicated that US Steel would permanently shut down Batteries 7, 8 and 9 by April 16, 2009. The Second Amendment provided that US Steel was not required to meet applicable air emission limits at Batteries 1, 2 and 3 until December 2013 – a full three years after entry of the agreement. While the Second Amendment required maintenance and repair projects to be implemented at batteries 15, 19 and 20, it did not require that Batteries 19 and 20 meet applicable opacity limits until December 2012 and December 2014, respectively. US Steel agreed to replace the No. 5 and No. 7 Quench Towers with "new Low Emission Quench Towers" by December 2013. Finally, the Second Amendment raised the possibility, based on a series of events, that US Steel would eventually cease using Quench Tower No. 1 or otherwise devise a plan to reduce particulate matter at the plant.

On July 7, 2011, US Steel and ACHD entered into a Third Amendment to the March 2008 COA. The Third Amendment replaced and terminated the June 1, 2007 Consent Order, the March 17, 2008 Consent Order, and the First and Second Amendments to the 2008 Consent Order. The Third Amendment indicated that the facility continued to violate opacity and pushing emission limitations. The Third Amendment re-imposed operational limits for coking times at Batteries 1, 2 and 3, extended the compliance deadline for Batteries 1, 2 and 3 to December 2013, and required various other repairs be performed on Batteries 1, 2, 3, 15, 19 and 20. While the Third Amendment identified violations relating to pushing and travel emissions, the agreement did not require specific corrections designed to prevent further violations. The Third Amendment also stated that US Steel had submitted a protocol for evaluating particulate matter at Quench Tower No. 1, but it contained no requirement that the evaluation be performed. The Third Amendment re-imposed the obligation to install two new quench towers at the plant by December 2013, and suggested the possibility that US Steel may need to cease using Quench Tower No. 1 or otherwise devise a plan to reduce particulate matter at the plant. The Third Amendment was not advertised for public comment or entered as a Court Order.

On May 16, 2012, ACHD entered into an Agreement with US Steel to provide a grant of $2,913,124.00 to partially defray the costs of installing two new quench towers at the plant.

On August 7, 2014, US Steel and ACHD entered into its most recent Consent Order and Agreement to address continuous charging emission violations at the newly constructed Battery C. The Consent Order allowed US Steel until October 31, 2015 to install a u-tube system on Battery C to address the violations, and until April 30, 2016 to comply with applicable charging emission standards. The Consent Order alleged that US Steel had not conducted a compliance test for the Battery C combustion stack, but the Consent Order did not require that the test be performed. Similarly, the Consent Order alleged that US Steel's operates Battery C in violation of sulfur limits for the PEC Baghouse and Quench Tower, but it does not require compliance with those limits. Instead, the Consent Order requires US Steel to submit an application to "amend" IP 0052-1011 "to address" the violations.

VIOLATIONS

Article XXI, Section 2105.21 of the Department's regulations establish emission limitations and standards for coke ovens, and gases from coke ovens, "installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978" and "any

other battery of coke ovens." The Clairton Coke Works is also subject to applicable Federal National Emission Standards for Hazardous Air Pollutants ("NESHAP") under 40 CFR Part 63.

Battery 1

Battery 1 at the Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XXI of ACHD's Regulations.

Subsection 2105.21.f.3 of Article XXI ("Subsection 2105.f.3") regulates opacity limitations on coke battery combustion stacks. Subsection 2105.f.3 states "No person shall operate, or allow to be operated, any battery of coke ovens in such manner that, at any time, emissions from the combustion stack serving such battery; equal or exceed an opacity of 20% for a period or periods aggregating in excess of three (3) minutes in any 60 minute period" ("20% Opacity Limit for Combustion Stacks"). Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 1 violated the 20% Opacity Limit for Combustion Stacks an aggregate of 707 times. (Individual violations and dates are set forth in Appendix A, attached hereto and incorporated herein)

Subsection 2105.21.f.4 of Article XXI ("Subsection 2105.f.4") further regulates emissions from combustion stacks: "No person shall operate, or allow to be operated, any battery of coke ovens in such manner that, at any time, emissions from the combustion stack serving such battery; equal or exceed an opacity of 60% at any time" ("60% Opacity Limit for Combustion Stacks"). Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 1 violated the 60% Opacity Limit for Combustion Stacks an aggregate of 106 times. (Individual violations and dates are set forth in Appendix A, attached hereto and incorporated herein)

Subsection 2105.21.e.5 of Article XXI ("Subsection 2105.21.e.5") limits emissions from hot coke being transported to the quench tower: "No person shall operate, or allow to be operated, any battery of coke ovens unless there is installed on such battery a pushing emission control device which is designed to reduce fugitive emissions from pushing to the minimum attainable through the use of BACT, nor shall any person operate, or allow to be operated any battery of coke ovens in such manner that visible emissions from the transport of hot coke in the open atmosphere exceed ten percent (10%) opacity at any time" ("10% Opacity Limit for Travel Emissions"). Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 1 violated the 10% Opacity Limit for Travel Emissions an aggregate of 67 times. (Individual violations and dates are set forth in Appendix A, attached hereto and incorporated herein)

Under the July 6th, 2011 Third Amendment to the 2008 COA between the ACHD and US Steel (which superseded all prior Consent Order and Agreements), Battery 1 was required to achieve compliance with all standards of Article XXI 2105.21 by December 31, 2013. Of the violations above, 202 of the violations of section 2105.21.f.3 of Article XXI occurred after the compliance date, 27 of the violations of section 2105.21.f.4 occurred after the compliance date, and 12 of the deviations of section 2105.21.e.5 occurred after the compliance date. The ACHD has taken no action to enforce the terms of the Third Amendment to the 2008 COA in Court.

Battery 2

Battery 2 at the Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XI of ACHD's Regulations.

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 2 violated the 20% Opacity Limit for Combustion Stacks an aggregate of 1177 times. (Individual violations and dates are set forth in Appendix B, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 2 violated the 60% Opacity Limit for Combustion Stacks an aggregate of 281 times. (Individual violations and dates are set forth in Appendix B, attached hereto and incorporated herein).

- Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 2 violated the 10% Opacity Limit for Travel Emissions an aggregate of 76 times. (Individual violations and dates are set forth in Appendix B, attached hereto and incorporated herein).

Under the July 6th, 2011 Third Amendment to the 2008 COA between the Allegheny County Health Department and US Steel (which superseded and terminated all prior Consent Order and Agreements), Battery 2 was required to achieve compliance with all standards of Article XXI 2105.21 by December 31, 2013. Of the violations above, 491 of the violations of section 2105.21.f.3 of Article XXI occurred after the compliance date, and 94 of the violations of section 2105.21.f.4 occurred after the compliance date, and 15 of the violations of section 2105.21.e.5 occurred after the compliance date . The ACHD has taken no action to enforce the terms of the Third Amendment to the 2008 COA in court.

Battery 3

Battery 3 at Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XI of ACHD's Regulations.

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 3 violated the 20% Opacity Limit for Combustion Stacks an aggregate of 1332 times. (Individual violations and dates are set forth in Appendix C, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 3 has violated the 60% Opacity Limit for Combustion Stacks an aggregate of 269 times. (Individual

violations and dates are set forth in Appendix C, attached hereto and incorporated herein).

- Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 3 has violated the 10% Opacity Limit for Travel Emissions an aggregate of 79 times. (Individual violations and dates are set forth in Appendix C, attached hereto and incorporated herein).

Under the July 6th, 2011 Third Amendment to the 2008 Consent Order and Agreement between the ACHD and US Steel (which superseded and terminated all prior Consent Order and Agreements), Battery 3 was required to achieve compliance with all standards of Article XXI 2105.21 by December 31, 2013. Of the violations above, 453 of the violations of section 2105.21.f.3 occurred after the compliance date, 95 of the violations of section 2105.21.f.4 occurred after the compliance date, and 16 of the violations of section 2105.21.e.5 occurred after the compliance date. The ACHD has taken no action to enforce the terms of the Third Amendment to the 2008 COA in court.

Battery 13

Battery 13 at Clairton Coke Works has violated and continues to violated applicable emission limitations under Article XI of ACHD's Regulations.

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 13 violated the 20% Opacity Limit for Combustion Stacks an aggregate of 225 times. (Individual violations and dates are set forth in Appendix D, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 13 has violated the 60% Opacity Limit for Combustion Stacks an aggregate of 46 times. (Individual violations and dates are set forth in Appendix D, attached hereto and incorporated herein).

- Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 13 has violated the 10% Opacity Limit for Travel Emissions an aggregate of 28 times. (Individual violations and dates are set forth in Appendix D, attached hereto and incorporated herein).

The Third Amendment to the 2008 Consent Order generally identifies pushing and stack opacity violations for the facility without identifying specific dates or sources; it requires no corrective actions at Battery 13.

Battery 14

Battery 14 at Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XI of ACHD's Regulations.

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 14 violated the 20% Opacity Limit for Combustion Stacks an aggregate of 337 times. (Individual violations and dates are set forth in Appendix E, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 14 has violated the 60% Emission Limitation for Combustion Stacks an aggregate of 58 times. (Individual violations and dates are set forth in Appendix E, attached hereto and incorporated herein).

- Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 14 has violated the 10 % Opacity Limitation for Travel Emissions an aggregate of 46 times. (Individual violations and dates are set forth in Appendix E, attached hereto and incorporated herein).

The Third Amendment to the 2008 Consent Order generally identifies pushing and stack opacity violations for the facility without identifying specific dates or sources; it requires no corrective actions at Battery 14.

Battery 15

Battery 15 at Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XXI of ACHD's Regulations

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 15 has violated the 20% Opacity Limitation for Combustion Stacks an aggregate of 917 times. (Individual violations and dates are set forth in Appendix F, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 15 has violated the 60% Emission Limitation for Combustion Stacks an aggregate of 172 times. (Individual violations and dates are set forth in Appendix F, attached hereto and incorporated herein).

- Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 15 has violated the 10% Opacity Limitation for Travel Emissions an aggregate of 42 times. (Individual violations and dates are set forth in Appendix F, attached hereto and incorporated herein).

The Third Amendment to the 2008 Consent Order requires that US Steel "continue to implement" an "Advanced Patching Plan" at Battery 15. The Third Amendment to the 2008 Consent Order does not compel US Steel to cease violations at Battery 15.

Battery 19

Battery 19 at Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XXI of ACHD's Regulations

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 19 violated the 20% Emission Limitation for Combustion Stacks an aggregate of 317 times. (Individual violations and dates are set forth in Appendix G, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 19 has violated the 60% Opacity Limitation for Combustion Stacks an aggregate of 79 times. (Individual violations and dates are set forth in Appendix G, attached hereto and incorporated herein).

- Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 19 violated the 10% Opacity Limitation for Travel Emissions an aggregate of 121 times. (Individual violations and dates are set forth in Appendix G, attached hereto and incorporated herein).

The Third Amendment to the 2008 Consent Order required Battery 19 to achieve compliance with the opacity standards in Article XXI 2105.21(f) by December 31, 2012. Of the violations of section 2105.21.f.3 above, 255 occurred after the compliance date, and of the violations of section 2105.21.f.4 above, 31 occurred after the compliance date. The ACHD has taken no action to enforce the terms of the Third Amendment to the 2008 COA in court.

Battery 20

Battery 20 at Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XXI of ACHD's Regulations.

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 20 violated the 20% Opacity Limitation for Combustion Stacks an aggregate of 184 times. (Individual violations and dates are set forth in Appendix H, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery 20 violated the 60% Opacity Limitation for Combustion Stacks an aggregate of 44 times. (Individual

violations and dates are set forth in Appendix H, attached hereto and incorporated herein).

- Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, Battery 20 violated the 10% Opacity Limitation for Travel Emissions an aggregate of 113 times. (Individual violations and dates are set forth in Appendix H, attached hereto and incorporated herein).

The Third Amendment to the 2008 Consent Order required Battery 20 to achieve compliance with the combustion stack opacity standards in Article XXI 2105.21(f) by December 31, 2014. Of the violations of Subsection 2105.21.f.3 above, 10 occurred after the compliance date, and of the violations of Subsection 2105.21.f.4 above, 2 occurred after the compliance date. The ACHD has taken no action to enforce the terms of the Third Amendment to the 2008 COA in court.

Battery B

Battery B at Clairton Coke Works has violated and continues to violate applicable emission limitations under Article XXI of ACHD's Regulations

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, Battery B violated the 20% Opacity Limitation for Combustion Stacks an aggregate of 328 times. (Individual violations and dates are set forth in Appendix I, attached hereto and incorporated herein).

- Based on monthly Battery Stack Performance Reports submitted by US Steel to ACHD, between January 1, 2012 and May 31, 2015, 2014, Battery B violated the 60% Opacity Limitation for Combustion Stacks an aggregate of 52 times. (Individual violations and dates are set forth in Appendix I, attached hereto and incorporated herein).

The Third Amendment to the 2008 Consent Order generally identifies pushing and stack opacity violations for the facility without identifying specific dates or sources; it requires no corrective actions at Battery B.

Pushing Emission Control (PEC) System for Batteries 1, 2, 3

The PEC System for Batteries 1, 2, 3 uses a moveable fume hood to capture emissions from the pushing of hot coke. US Steel has operated the PEC System for Batteries 1, 2 and 3 in a manner that has violated and continues to violate applicable emissions limitations under Article XXI of the ACHD Regulations.

Subsection 2105.21.e.4 of Article XXI ("Subsection 2105.21.e.4") regulates fugitive and device outlet emissions from the PEC system: "No person shall operate, or allow to be operated, any battery of coke ovens unless there is installed on such battery a pushing emission control

device which is designed to reduce fugitive emissions from pushing to the minimum attainable through the use of BACT, nor shall any person operate, or allow to be operated any battery of coke ovens in such manner that fugitive pushing emissions or emissions from the pushing emission control device outlet equal or exceed an opacity of 20% at any time, except if the Department determines … that such emissions are of only minor significance" (20% Opacity Limit for PEC Baghouses"). Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel operated the PEC system for Batteries 1, 2, 3 in a manner that violated the 20% Opacity Limit for PEC Baghouses on 37 occasions for Battery 1, 39 occasions for Battery 2, and 41 occasions for Battery 3. (Individual violations and dates are set forth in Appendix J, attached hereto and incorporated herein)

Section 2105.03 of Article XXI states that "All air pollution control equipment required by this Article or any permit or order under this Article, and all equivalent compliance techniques which have been approved by the Department pursuant to this Article, shall be properly installed, maintained, and operated consistent with good air pollution control practice." (Reduced Efficiency Pushing Standard). Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel operated the PEC System for Batteries 1, 2, 3 in a manner that violated the Reduced Efficiency Pushing Standard on 61 occasions. (Individual violations and dates are set forth in Appendix M, attached hereto and incorporated herein)

Clairton's Title V Operating Permit No. 0052 B.1.c.1 incorporates Section 2105.03 of Article XXI: "The permittee shall not operate, or allow to be operated Battery 1 or Battery 2 or Battery 3, unless the Battery 1, 2, & 3 PEC System baghouse is properly installed, operated, and maintained according to the following conditions, at all times: Emissions due to the pushing of Battery 1, 2, & 3 coke ovens shall be vented through the PEC System baghouse dust collector." (Continuous Operation Standard). Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and June 30, 2014, US Steel failed to properly operate the PEC System for Batteries 1, 2 and 3, in violation of the Continuous Operation Standard, on 53 occasions, resulting in 5,202 instances of oven pushing emissions not being captured. (Individual violations and dates are set forth in Appendix N, attached hereto and incorporated herein)

The Third Amendment to the 2008 Consent Order does not identify violations of applicable emission limitations at the PEC System for Batteries 1, 2 and 3.

Pushing Emission Control (PEC) System for Batteries 13, 14, 15

The PEC System for Batteries 13, 14, 15 uses a moveable fume hood system to capture emissions from the pushing of hot coke. US Steel has operated the PEC System for Batteries 13, 14 and 15 in a manner that violated and continues to violate applicable emission limitations under Article XXI of ACHD's Regulations.

Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel operated the PEC System for Batteries 13, 14, 15 in a manner that violated the 20% Opacity Limit for PEC Baghouses on 21 occasions for Battery 13,

34 occasions for Battery 14, and 32 occasions for Battery 15. (Individual violations and dates are set forth in Appendix K, attached hereto and incorporated herein)

Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel operated the PEC System for Batteries 13, 14, 15 in a manner that violated the Reduced Efficiency Pushing Standard on 47 occasions. (Individual violations and dates are set forth in Appendix M, attached hereto and incorporated herein)

Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel failed to properly operate the PEC System for Batteries 13, 14, 15, in violation of the Continuous Operation Standard, on 68 occasions, resulting in 4,681 instances of oven pushing emissions, including particulate matter, carbon monoxide, mono nitrogen oxides, sulfur oxides, volatile organic compounds, and benzene, not being captured. (Individual violations and dates are set forth in Appendix N, attached hereto and incorporated herein)

The Third Amendment to the 2008 Consent Order does not identify violations of applicable emission limitations at the PEC System for Batteries 13, 14 and 15.

Pushing Emission Control (PEC) System for Batteries 19 & 20

The PEC System for Batteries 19 and 20 uses a moveable fume hood system to capture emissions from the pushing of hot coke. US Steel has operated and continues to operate the PEC System for Batteries 19 and 20 in violation of multiple emission limitations under Article XXI of ACHD's Regulations.

Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel operated the PEC System for Batteries 19 and 20 in a manner that violated the 20% Opacity Limit for PEC Baghouses on 126 occasions for Battery 19, and on 94 occasions for Battery 20. (Individual violations and dates are set forth in Appendix L, attached hereto and incorporated herein)

Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel operated the PEC System for Batteries 19 and 20 in a manner that violated Reduced Efficiency Pushing Standard on 59 occasions. (Individual violations and dates are set forth in Appendix M, attached hereto and incorporated herein)

Based on Semi-Annual Reports submitted by US Steel to ACHD, between March 27, 2012 and December 31, 2014, US Steel failed to properly operate the PEC system for Batteries 19 and 20, in violation of the Continuous Operation Standard, on 87 occasions, resulting in 1,659 instances of oven pushing emissions, including particulate matter, carbon monoxide, mono nitrogen oxides, sulfur oxides, volatile organic compounds, and benzene, not being captured. (Individual violations and dates are set forth in Appendix N, attached hereto and incorporated herein)

AGGREGATE EMISSIONS AND HEALTH EFFECTS

During the period covered by this notice, US Steel has operated the Clairton Coke Works in a manner that violated applicable emission limitations intended to protect public health safety and welfare and the environment on approximately 6700 occasions. The pollutants from the hundreds of ovens, ten combustion stacks, and multiple baghouse and quench tower stacks at the facility cause impacts that affect persons living miles from the facility. At a health level, the violations documented in this notice mean that excess particulate matter and other pollutants are regularly being emitted into the air and inhaled by local citizens, likely resulting in an elevated risk of cardiovascular disease, lung disease, various cancers including lung cancer, chronic asthma and other illnesses that increase mortality and morbidity rates.

Particulate Matter

According to the World Health Organization, PM 2.5 contains sulfate, nitrates, ammonia, sodium chloride, black carbon, mineral dust and water. These tiny particles are able to lodge deep into the lungs, where they can increase the risk of developing or exacerbating both short and long-term health problems. Short term concerns include eye, nose, throat and lung irritation, coughing and shortness of breath. Long term impacts include reduced lung function, aggravated asthma, chronic bronchitis, irregular heartbeat, nonfatal heart attacks and cancer. Increases in PM2.5 concentrations have also been linked to increased hospitalizations for cardiovascular and respiratory problems and increased rates of mortality and morbidity. The ACHD has stated that particulate matter emissions in the Liberty-Clairton area are dominated by the U.S. Steel Clairton Coke Works.

On each occasion that the combustion stacks, PEC baghouses, and processes related to charging, pushing, and traveling of hot coke to quench towers exceed emission limitations, the facility releases excess particulates into the air. These emissions are in addition to those levels emitted as allowed under the facility's operating permits. According to US Steel's emissions inventory, the Clairton Coke Works released 527 tons of PM 10 and 342 tons of PM 2.5 into the atmosphere in 2013.

Volatile Organic Compounds

Volatile organic compounds (VOCs) are released during several stages of coke making operations. The highest VOCs emissions are seen from the combustion stacks, charging operations and door leaks. VOCs can cause harm as a component of particulate matter and in their own right. In addition to direct exposure concerns, VOCs react in the atmosphere with nitrogen oxide emissions to form ozone. Ozone exposure, even at low levels, can trigger adverse health effects in children and healthy adults, including respiratory inflammation, chest pain, coughing and pulmonary congestion. Ozone can also aggravate lung diseases such as bronchitis, emphysema, and asthma. Repeated exposure to ozone may permanently scar lung tissue. According to US Steel's emissions inventory, the Clairton Coke Works released 306 tons of VOCs into the atmosphere in 2013.

Nitrogen Oxide

The Nitrogen Oxide (NOx) emissions released from the combustion stacks, travel operations and PEC baghouses not only constitute a health hazard, but also contribute to ozone pollution. Nitrogen oxides can irritate the lungs and lower resistance to respiratory infections. In addition to human health impacts, NOx in combination with other emissions are known for their contribution to acid rain, which negatively impacts our waterways. Violations of the combustion stack opacity limitations can lead to increased amounts of NOx entering the atmosphere and the lungs of local residents. According to US Steel's emissions inventory, the Clairton Coke Works released 3632 tons of NOx into the atmosphere in 2013.

Sulfur Dioxide

Clairton Coke Works emits high amounts of sulfur dioxide ("SO2") from its combustion stacks, PEC baghouses, travel operations and quench towers. Current scientific evidence links short-term exposures to SO2 with breathing problems, respiratory illnesses and exacerbation of existing cardiovascular disease among other concerns. The US EPA relies on studies showing a connection between short-term exposure to SO2 and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics. According to US Steel's emissions inventory, the Clairton Coke Works released 1,603 tons of SO2 into the atmosphere in 2013.

Based on the information contained in this notice, PennFuture has reason to believe that US Steel continues to operate the Clairton Coke Works in violation of the Federal Clean Air Act (the CAA), 42 U.S.C. § 7401 et seq. (1970), the Pennsylvania Air Pollution Control Act, 35 P.S. §§ 4001-4015 (APCA), and Article XXI of the Allegheny County Health Department's (ACHD or "the Department") Rules and Regulations, Article XXI, § 2109.11. PennFuture reserves all rights to amend this notice and identify additional claims as further facts are developed. If you believe that any of the facts described in this notice are in error or if you have any information indicating that US Steel has not violated the above laws and regulations, we urge you to contact the undersigned counsel immediately. PennFuture is interested in early and prompt resolution of these violations.

Sincerely,

George Jugovic, Jr.
Chief Counsel

PennFUTURE

Every environmental victory grows the economy.®

Media Room / Press Release

PennFuture announces notice of legal action against U.S. Steel, regulatory agencies

January 28, 2016

Contact
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724.747.0692

Pittsburgh, PA (January 28, 2016) — PennFuture announced legal action against North America's largest coke producer for past and continuing violations of county, state, and federal clean air laws and the degradation of public health. The action involves the regulatory agencies that have failed to enforce these laws.

Standing in front of a backdrop of the photography exhibit *In the Air: Visualizing What We Breathe*, PennFuture executive staff, independent researchers, citizens of the region, and allies explained why PennFuture has provided U.S. Steel, the Allegheny County Health Department (ACHD), Pennsylvania Department of Environmental Protection (DEP), and the U.S. Environmental Protection Agency (EPA) with notice of its intent to file a citizen suit under the federal Clean Air Act, Pennsylvania Air Pollution Control Act, and Article XXI of the ACHD's rules and regulations.

It has been over 45 years since passage of the Clean Air Act and systemic violations at U.S. Steel's Clairton Coke Works continue. PennFuture has exposed continuing and new violations, and research shows that these violations have adverse public health impacts. The environmental organization seeks to hold U.S. Steel accountable and have it become an active party in improving regional air, not making it worse.

"PennFuture, as Pennsylvania's leading environmental watchdog, has a responsibility to bring suit against egregious illegal polluters and the regulatory agencies that have failed to uphold the law," said George Jugovic, chief counsel with PennFuture. "It's unfortunate that U.S. Steel is not a responsible neighbor to the residents of the region and its own employees. The health of our community continues to suffer because of U.S. Steel's ongoing disregard for environmental regulations."

"After an exhaustive review of documents, research, and interviews with area residents, PennFuture has revealed that Clairton Coke Works has been in violation of pollution limits approximately 6,700 times from January 1, 2012 to May 31, 2015. That is akin to polluting over five times a day, every day for nearly three and a half years during the period for which we were provided monitoring reports," explained Jugovic.

"Using data from the EPA's National Air Toxics Assessment, Allegheny County ranks as one of the worst counties in the nation for cancer risk," said John Graham, senior scientist for Clean Air Task Force. "The assessment indicates toxic emissions from industrial point sources as a primary factor that contributes to the County's poor performance."

"The data shows that fine particulate matter plumes, like those emitted from the Clairton Coke Works, travel over a wide geographical area and settle as far as the City of Pittsburgh," said Albert Presto, assistant research professor with Carnegie Mellon's Center for Atmospheric Particle Studies and the Department of Mechanical Engineering. "The particulate matter and other emissions don't simply settle back within the footprint of the facility or even the geographic border of the Liberty-Clairton area."

The American Lung Association's 2015 "State of the Air" report ranks the Pittsburgh region ninth nationally for the most year-round particle pollution, and Allegheny County specifically receives an "F" grade for high ozone days and particle pollution. Poor air quality is a public health concern and can lead to respiratory, cardiovascular diseases, cancer, reproductive harm, and premature death.

"In the Clairton community, we don't see the black soot that used to be on our bedsheets and windows anymore. But unfortunately, people don't realize it's the fine particulate matter that is still in the air that is just as dangerous," said Cheryl Hurt, 68-year-old Clairton resident and local business owner. "I run a child day care center, so I have a Speck sensor that tells me when it is and when it's not a good day for the children to go outside. I have to be careful of this, and other people in this community need to be aware of this as well."

"Unfortunately, each day communities such as Clairton are faced with environmental justice issues such as violations of the Clean Air Act described today. Residents of the Liberty-Clairton area have been negatively

PennFuture Facts
State & Public Health: A conversation that's not fading away

Session Daze
HB 965: The latest attack on environmental protection

Re: Energy
PA's resolution for 2016: cut methane emissions

A Climate for Change
Friday the 13th conference explores oil train fears

Flows Downstream
Coming soon: Weigh in on your municipality's MS4 permit

A Bear In the Woods
PennFuture continues to fight irresponsible oil and gas development in Pennsylvania

Penn Future Blogs

impacted by the industrial pollution occurring at Clairton Coke Works for decades at great environmental, economic, and - most importantly - health expense. All members of the community must address these issues and work together to empower those most affected and most vulnerable, and we're proud to be a part of that effort," said Michelle Naccarati, executive director of Women for a Healthy Environment.

"The simple fact is that Clairton Coke Works is operating illegally and public health is suffering because of it," said Jugovic. "They have abandoned plans and failed to take necessary steps to improve air quality and regulatory agencies have failed to take action. While we are disheartened that this legal action is necessary, we stand prepared and ready to work with any and all parties to get the facility into compliance with applicable laws."

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PennFuture is a statewide public interest membership organization founded in 1998 with offices in Harrisburg, Pittsburgh, Philadelphia and Wilkes-Barre. The organization's activities include litigating cases before regulatory bodies and in local, state, and federal courts; advocating and advancing legislative action on a state and federal level; public education; and assisting citizens in public advocacy.

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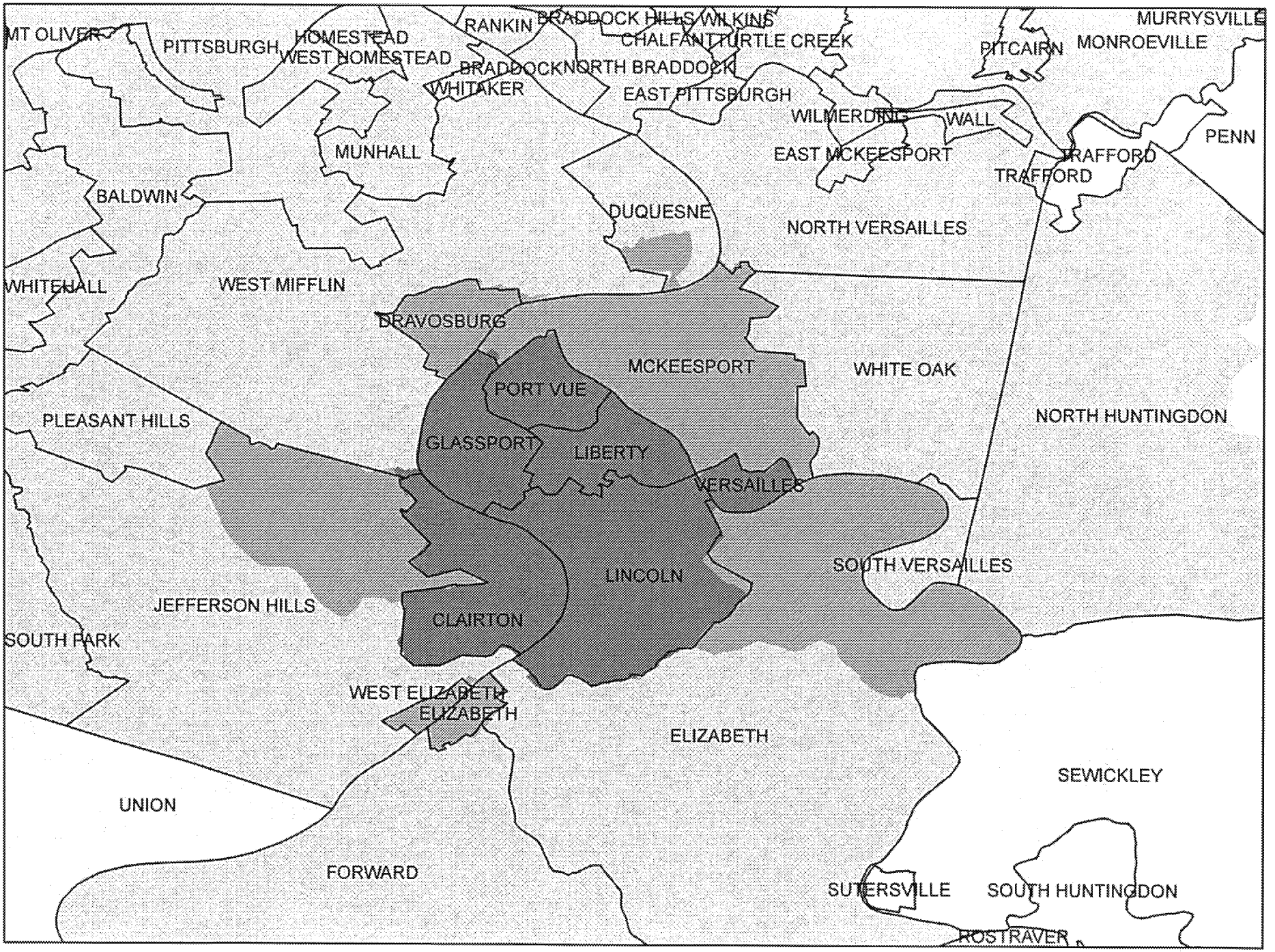
Cancer Predictions due to Air Quality

South East Allegheny County, PA. Date: 4/3/15



Neville Island Action Plan
Including Shenango Coke Works

Date: May 27, 2015

Issue/ Topic: Citizens' groups, Group against Smog and Pollution (GASP) and Clean Air Council (CAC) have voiced complaints and concerns over emissions from Shenango Coke Plant. Members of Allegheny County Clean Air Now (ACCAN) who are also affiliated with the above mentioned organizations visited EPA Region 3 on February 4, 2015 to express their discontent with the Allegheny County Health Department (ACHD) in their approach addressing issues at Shenango. Shawn Garvin, Regional Administrator of EPA Region III, plans to visit the area.

Background:

- The Shenago Coke Plant is located in Neville Island, Allegheny County, PA and is currently operating one battery oven that is over 30 years old.
- Shenango is the subject of a federal court Consent Decree with both EPA and ACHD entered by the U.S. District Court for the Western District of Pennsylvania in Pittsburgh on November 6, 2012 (Consent Decree). The Consent Decree required the installation of a new wastewater treatment plant and more rigorous repair of the coke ovens.
- On February 6, 2014, GASP, issued a notice of intent to sue Shenango for violations, of seven different air pollutant emission standards applicable to Shenango' s coke oven battery and violations a federal court Consent Decree.
- Shenango has violated CAA requirements of the Consent Decree on a number of occasions. EPA and ACHD prepared a number of demands for CAA prepared a number of demands for CAA stipulated penalties of a combined total of approximately $60,000 for these violations. ACHD continues to provide on-site routine inspections of Shenango to verify CAA compliance.
- On or about April 2014, ACHD reached a settlement requiring the company to pay $300,000 fine and spend more than $1 million on pollution control upgrades.
- On May 8, 2014, GASP filed a federal citizen suit and that suit is still pending.
- EPA conducted a Clean Air Act inspection at the facility on January 27-28, 2015 to evaluate compliance with ACHD's regulations as well as the existing agreements as they pertain to coke oven operations.

Actions: See attached

Actions Being Taken by ACHD:

- ACHD (with EOA) prepared a number of demands for CAA stipulated penalties of a combined total of approx. $60,000;
- ACHD continues to provide on-site routine inspections to verify CAA compliance
- April 2014 ACHD reached a settlement requiring the company to pay $300,000 fine and spend more than $1M on pollution control upgrades;
- ACHD offered to share results with EPA of their daily inspections:
- ACHD plans on installing cameras for monitoring compliance on a more routine basis;
- ACHD has put up passive VOC tubes around the facility (similar to ones around PES/Sunoco in South Philadelphia). The monitoring results so far indicate that the benzene, toluene, and xylene amounts in the air in the vicinity of the citizens is less than the levels prescribed in the ATSDR guidance for those chemicals with the highest benzene reading being 1.05 parts per billion.
- ACHD will locate summa canisters to 5 residents to capture an hour's worth of sampling during periods of high malodor;
- ACHD is working with the union to determine if they can do evening and weekend inspections;
- ACHD meets with the community group every month to discuss issues of concern;
- ACHD did a month-long evening odor observation project last fall. EPA requesting data.

Region 3 Actions

- The Office of Air Enforcement and Compliance Assistance conducted an inspection at the facility on January 27-28, 2015. A copy of EPA's inspection report was provided to ACCAN as a courtesy on May 14, 2015.
- Met with ACCAN at Region 3 on February 4, 2015
- ACHD has shared the results of their daily inspections at the facility with EPA. EPA has reviewed ACHD inspections and enforcement actions and has determined ACHD does a good job tracking compliance at Shenango. One of the ACHD inspectors recently retired and this has affected the number of inspections that can be done at Shenango. Currently the County inspects Shenango three times per week and the large Clairton coke plant seven times per week.
- The coke pushing emissions have gone down as the Company reduced their production rate of coke therefore leaving the coke in the ovens for a longer period of time. The soaking emissions have gone down also and County data only shows one violation per month. Citizen complaints are still occurring but the complaints are mostly for odors.
- ACHD has installed a camera for monitoring compliance at Shenango and that information is being examined at the present time to compare with citizen complaint information.
- ACHD will locate summa canisters at 5 residents to capture an hour's worth of sampling during periods of high malodor. The residents will activate the canisters.
- EPA will provide the canisters and the lab analysis using the Fort Meade laboratory.
- EPA will increase assistance to ACHD on efforts to address issues at the facility including increased presence.
- RA met with ACCAN and ACHD on March 10.

- APD plans to meet with ACCAN Monday evening, June 8, 2015.
- APD plans to meet with ACHD to discuss program and enforcement efforts on June 9, 2015.
- Increase presence of Region 3 regarding Shenango.
- Obtain Method 303 observations report.

Other Non-Shenango Specific Actions

- Working with ACHD on Targeted Airshed Grant proposal. Potential projects could include a joint project with US Steel to install SmartStart Technology on 38 locomotive engines and a rebuild of 21 locomotive engines. An alternate project under discussion would be similar to US Steel but involve CSX locomotives.
- Reviewing the feasibility of conducting a Burnwise campaign in western PA including Allegheny County.
- Follow-up with Region 5 on DTE Michigan compliance status. Region 5 has not been tracking compliance at the facility.